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| 09/487,287 | 01/19/2000 | Andrea De Toffol | 8907-9021 | 2986 |

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EXAMINER

FERGUSON, LAWRENCE D

ART UNIT PAPER NUMBER

1774

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/487,287

Applicant(s)

DE TOFFOL ET AL.

Examiner

Lawrence D Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Request for Reconsideration

1. This action is in response to the request for reconsideration mailed March 31, 2004. The indicated allowability of claim 15 is withdrawn in view of the newly discovered reference(s) to Keyser et al. (U.S. 4,988,550). Claims 1-17 are pending.

Claim Rejections – 35 USC § 103(a)

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashima et al. (U.S. 5,442,523) in view of EP 0724181.

Kashima discloses a backlighting device for use with display panels that has a light conducting plate and a light source provided in proximity to the end portion of one or both sides of the light conducting plate (column 2, lines 16-20) where backlight devices of displays are analogous to luminous signs. The panel of Kashima can be made by molding or casting (column 6, lines 48-49) having light diffusing capability and all surfaces of the light conducting plate being covered with a light reflecting plate or film except at least the end portion of the side and on the exit face (column 2, lines 20-26). The reference discloses single lamp edge lighting, dual lamp edge lighting and edge

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lighting (column 2, lines 30-48) comprising barium sulfate (column 3, lines 9-10) which can be added to the conducting layer with light diffusing areas (column 3, lines 5-10 and 32). Kashima discloses the light conducting plate made of polymethyl methacrylate PMMA having a thickness of 2mm (column 7, lines 64-66) and which are used as the thermoplastic layer with a commercial polycarbonate sheet 360 μ m thick (column 10, line 33) where polycarbonate is known to be a thermoplastic material. Figure 1(a) shows a composite panel having more than one edge that is used to light the referenced invention and Figure 3(a) shows a light transmissive sheet (7) and a light diffusing plate (3) attached to the sheet. Kashima discloses the method of shaping the sheets including molding and casting (column 6, lines 46-49). Kashima further discloses the light conducting plate has a thickness of 3mm (column 10, lines 42-47). A panel wherein the composite is prepared by coextrusion of the base sheet of thermoplastic polymer and of the diffusing layer of thermoplastic polymer or by compression molding of the thermoplastic polymer layer containing barium sulfate obtained by extrusion or casting is a product by process limitation. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966. The base sheet of Kashima is capable of containing particles of substances diffusing light, both of polymeric and inorganic type. Kashima does not explicitly disclose the composite area

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being greater than 600 cm². It would have been obvious to the average artisan for the area to be as instantly claimed since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237. Kashima does not disclose the diffusing light layer thickness, or amount by weight or particle size of barium sulfate.

EP '181 teaches a composite panel with a light reflective sheet in a back light unit under a transparent light guide plate with improved luminance (abstract) with a light diffusing sheet (page 4, line 17) having an average particle size of the inorganic filler of 0.1 to 7 μm and is in the range of 100 to 300 parts by weight, where the inorganic filler is barium sulfate (page 6, lines 20-31) and the amount of additive is 0.01 to 5 parts by weight (page 6, lines 50-51). EP '181 teaches the light diffusion sheet having a thickness of 113 μm (page 11, lines 14 and 54-55). Kashima and EP '181 are analogous art because they are from the same field of backlighting devices. It would have been obvious to one of ordinary skill in the art to include the thickness of the light diffusing layer, the amount by weight and average particle size of barium sulfate in the composite panel of Kashima because EP '181 teaches the sizes are conventional within the art. Further, the thickness, amount used and particle size each directly affect how much light is being diffused. Therefore each of these features are optimizable. One of ordinary skill would understand how to adjust the amounts and particle size of barium sulfate based on the amount of light desired to be diffused (See *In re Aller* 105 USPQ 233 and *In re Boesch* 205 USPQ 215).

Claim Rejections – 35 USC § 103(a)

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kashima et al. (U.S. 5,442,523) in view of EP 0724181 in further view of Keyser et al. (U.S. 4,988,550).

Kashima and EP '181 are relied upon for claim 1 as above. Kashima does not disclose parallel adhesive bands on the free surface of the base sheet. Keyser teaches a multilayer composite comprising a base layer with two adhesive strips with a width that is less than or equal to the width of the base sheet (column 2, lines 5-15) which shows the width of the strips is adjustable. It would have been obvious to one of ordinary skill in the art to include parallel adhesive strips on the bottom of the base layer of Kashima in order for the display panel to have an improved resiliency when attached to different surfaces.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bruneau et al (U.S. 6,107,444) teaches a thermoplastic panel (column 1, lines 21-22) having parallel adhesive strips having a width of a few mm to a few cm, for example about 0.5 to 20 mm, attached on the face of the panel (column 4, lines 55-67).

Response to Arguments

6. Applicant's remarks regarding rejection made under 35 U.S.C. 103(a) as being unpatentable over Kashima et al. (U.S. 5,442,523) in view of EP 0724181 have been considered but have been found unpersuasive. Applicant argues there is no diffusing material made of inorganic particles. Kashima discloses light diffusing material applied to the conducting plate including barium sulphate (column 3, lines 4-10) which is an inorganic material. Applicant argues the light diffusing material of Kashima must never completely cover the conducting plate, because it would result in an uneven luminance. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., completely covering the conducting plate with light diffusing material) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, column 3, lines 4-10 discloses applying the light diffusing material to the conducting plate. Despite the evenness of the luminance, the layer performs its function, which is diffusing light. Applicant argues Kashima does not disclose the light diffusing material forming a layer. By applying the light diffusing material on the light conducting plate, a light diffusing layer is formed. Applicant argues those of skill in the art would not have drawn any hint to conceive a thermoplastic layer containing from 0.01 to 2%wt of barium sulfate inorganic particles could solve the technical problem of the claimed invention. The

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technical problem of the claimed invention is an intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Applicant further points to Table 1 of the instant application to overcome *Kashima*. This example does not overcome the rejection of *Kashima* in view of EP '181. Applicant has not shown that the *Kashima* reference film cannot show the claimed features. Furthermore, the comparison using titanium oxide lacks relevance because *Kashima* meets the claimed limitation of a light diffusing layer comprising barium sulphate (column 3, lines 4-10). Applicant states a declaration signed by one of the inventors, Alberto Luca Stasi shows an uneven and decreased diffusing layer from the light source. No declaration was found attached to Applicant's remarks. Applicant argues EP '181 has nothing to do with the present invention. EP '181 teaches a composite panel having a light diffusing sheet (abstract and page 4, line 17). Applicant argues EP '181 does not contain any inorganic filler. EP '181 teaches a composite panel with a light reflective sheet in a back light unit under a transparent light guide plate with improved luminance (abstract) with a light diffusing sheet (page 4, line 17) having an inorganic filler, barium sulfate (page 6, lines 20-31).

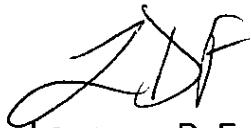
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Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lawrence D. Ferguson
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
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